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Seventh Semester B.E./B.Tech. Degree Examination, Dec.2024/Jan.2025

Introduction to Dot Net Framework for Application Development

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

- 1 a. Define method. Explain with syntax, how methods are declared and called in C#. Explain method overloading with an example program. (10 Marks)
- b. Write a C# program to find factorial of a given number using while AND for loops. (08 Marks)
- c. Define class scope and method scope. (02 Marks)

OR

- 2 a. Explain the need of handling exceptions in a C# program with syntax and explain the working of try, catch, throw and finally keywords used in exception handling. (10 Marks)
- b. Write a C# program to check whether a number is odd or even using methods. (06 Marks)
- c. Differentiate between break and continue statements with examples. (04 Marks)

Module-2

- 3 a. Explain different types of constructors with examples. (10 Marks)
- b. What is the need of access specifiers in C#. Explain public and private access specifiers in detail with examples. (10 Marks)

OR

- 4 a. Define Enum with syntax. Write a C# program to create a Enumeration type for months and display value of June as 6. (07 Marks)
- b. Explain boxing and unboxing in C# with examples. (08 Marks)
- c. Differentiate between structures and classes. (05 Marks)

Module-3

- 5 a. Define inheritance. Explain the use of new, virtual and override keywords in method overloading with suitable examples. (10 Marks)
- b. Differentiate between optional parameters and Params array. (03 Marks)
- c. Explain the use of extension methods in C# with programming example. (07 Marks)

OR

- 6 a. What is the use of interfaces in C#? How is it defined in C#? Demonstrate the implementation of interface with example. (10 Marks)
- b. What is method overriding? Explain abstract classes, abstract methods, sealed classes and sealed methods with examples. (10 Marks)

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.

Module-4

- 7 a. Define indexer. List and explain set of operators provided by C# that you can use to access and manipulate the individual bits in an int. (07 Marks)
- b. What is the use of generics in C#? write a C# program to swap two numbers using generic method. (08 Marks)
- c. Explain read-only and write-only properties with examples. (05 Marks)

OR

- 8 a. Write recursive algorithm for
- i) Inserting an item I into an ordered Binary Tree B.
 - ii) Display contents of a ordered Binary Tree, by visiting each node in sequence. (09 Marks)
- b. Define collection class. List different collection classes with description for each and explain any one in detail. (08 Marks)
- c. Differentiate between indexers and arrays. (03 Marks)

Module-5

- 9 a. What is LINQ? With suitable example, explain ordering, grouping and aggregating data. (10 Marks)
- b. Define delegate. How is it declared in C#? Explain with a programming example the declaration and usage of delegates in C#. (10 Marks)

OR

- 10 a. Write a C# program to implement '+' operator overloading. (10 Marks)
- b. How do you subscribe and unsubscribe methods in C# for delegate types? Explain the same with programming example. (10 Marks)
